

## **25.1 Introduction**

### **25.1.1 Purpose of the Rules**

The purpose of these rules is (1) to allocate responsibility among Developers and Transmission Owners and Load Serving Entities (“LSEs”), as described herein, for the cost of the new interconnection facilities that are required for the reliable interconnection of generation projects and Class Year Transmission Projects to the New York State Transmission System and to the Distribution System in compliance with the requirements of the type of interconnection service elected by the project Developer; and (2) allocate responsibility for the cost of interconnection facilities required for Capacity Resource Interconnection service (“CRIS”) and interconnection in compliance with the NYISO Deliverability Interconnection Standard. Section 25.6 of this Attachment S describes the rules to estimate and allocate responsibility for the cost of the interconnection facilities required for Energy Resource Interconnection Service (“ERIS”) and interconnection in compliance with the NYISO Minimum Interconnection Standard. Section 25.7 of this Attachment S describes the rules to estimate and allocate responsibility for the cost of interconnection facilities required for CRIS and interconnection in compliance with the NYISO Deliverability Interconnection Standard. Every Developer is responsible for the cost of the new interconnection facilities required for the reliable interconnection of its generation project or Class Year Transmission Project in compliance with the NYISO Minimum Interconnection Standard, as that responsibility is determined by these rules. In addition, every Developer electing CRIS is also responsible for the cost of the interconnection facilities required pursuant to the NYISO Deliverability Interconnection Standard, as that responsibility is determined by these rules.

These rules cover (i) Large Facilities greater than 20 MW subject to the Large Facility Interconnection Procedures set out in Attachment X to the ISO OATT (“LFIP”), (ii) Small Generating Facilities no larger than 20 MW subject to the Small Generator Interconnection Procedures set out in Attachment Z to the ISO OATT (“SGIP”) that are required to enter a Class Year Study pursuant to Section 32.3.5.3.2 of the SGIP, and facilities greater than 2 MW that seek to obtain or increase CRIS beyond the levels permitted by this Attachment S, Section 30.3.2.6 of the LFIP and Section 32.4.11.1 of the SGIP, as applicable.

As described herein, the intent is that each Developer be held responsible for the net impact of the interconnection of its project on the reliability of the New York State Transmission System. A Developer is held responsible for the cost of the interconnection facilities that are required by its project, facilities that would not be required but for its project. However, a Developer is not responsible for the cost of facilities that are, without considering the impact of its project, required to maintain the reliability of the New York State Transmission System. Transmission Owners are, in accordance with the ISO OATT and FERC precedent, responsible for the cost of the facilities that are, without considering the impact of the Developer’s project, required to maintain the reliability of the New York State Transmission System.

### **25.1.2 Definitions**

Unless defined here in Section 25.1.2 of this Attachment S, the definition of each defined term used in this Attachment S shall be the same as the definition for that term set forth in Section 1 of the ISO Open Access Transmission Tariff (“OATT”), Section 30.1 of Attachment X to the ISO OATT, Attachment Z to the ISO OATT, or Section 2 of the ISO Services Tariff.

**Acceptance Notice:** The notice by which a Developer communicates to the ISO its decision to accept a Project Cost Allocation or Revised Project Cost Allocation.

**Additional SDU Study:** A study that a Developer may elect to pursue if the Class Year Deliverability Study identifies the need for a new System Deliverability Upgrade (i.e., a System Deliverability Upgrade not previously identified and cost allocated in a Class Year Study and not substantially similar to a System Deliverability Upgrade previously identified and cost allocated in a Class Year Study) that requires additional study.

**Affected System:** An electric system other than the transmission system owned, controlled or operated by the Connecting Transmission Owner that may be affected by the proposed interconnection.

**Affected System Operator:** The entity that operates an Affected System.

**Affected Transmission Owner:** The New York public utility or authority (or its designated agent) other than the Connecting Transmission Owner that (i) owns facilities used for the transmission of Energy in interstate commerce and provides Transmission Service under the Tariff, and (ii) owns, leases or otherwise possesses an interest in a portion of the New York State Transmission System where System Deliverability Upgrades, System Upgrade Facilities, or Network Upgrade Facilities are or will be installed pursuant to Attachment P, Attachment X, Attachment S, or Attachment Z to the OATT.

**Annual Transmission Baseline Assessment (“ATBA”):** An assessment conducted by the ISO staff in cooperation with Market Participants, to identify the System Upgrade Facilities that Transmission Owners are expected to need during the time period covered by the Assessment to comply with Applicable Reliability Requirements, and reliably meet the load growth and changes in load pattern projected for the New York Control Area.

**Annual Transmission Reliability Assessment (“ATRA”):** An assessment, conducted by the ISO staff in cooperation with Market Participants, to determine the System Upgrade Facilities required for each generation project and Class Year Transmission Project included in this Assessment to interconnect to the New York State Transmission System in compliance with Applicable Reliability Requirements and the NYISO Minimum Interconnection Standard.

**Applicable Reliability Requirements:** The NYSRC Reliability Rules and other criteria, standards and procedures, as described in Section 25.6.1.1.1.1 of this Attachment S, applied when conducting the Annual Transmission Baseline Assessment and the Annual Transmission Reliability Assessment to determine the System Upgrade Facilities needed to maintain the reliability of the New York State Transmission System. The Applicable Reliability Requirements applied are those in effect when the particular assessment is commenced.

**Article VII Certificate:** The certificate of environmental compatibility and public need required under Article VII of the New York State Public Service Law for the siting and construction of any new transmission facility of a size and type specified in the statute.

**Article 10 Certificate:** The certificate of environmental compatibility and public need required under Article 10 of the New York State Public Service Law for the siting and construction of electric generating facilities with greater than 25 megawatts of capacity.

**Attachment Facilities:** The Connecting Transmission Owner's Attachment Facilities and the Developer's Attachment Facilities. Collectively, Attachment Facilities include all facilities and equipment between the Large Generating Facility or Class Year Transmission Project and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Large Facility to the New York State Transmission System. Attachment Facilities are sole use facilities and shall not include Stand Alone System Upgrade Facilities, Distribution Upgrades, System Upgrade Facilities or System Deliverability Upgrades.

**Byway:** All transmission facilities comprising the New York State Transmission System that are neither Highways nor Other Interfaces. All transmission facilities in Zone J and Zone K are Byways.

**Capacity Region:** One of four subsets of the Installed Capacity statewide markets comprised of: (1) Rest of State (*i.e.*, Load Zones A through F); (2) Lower Hudson Valley (*i.e.*, Load Zones G, H and I); (3) New York City (*i.e.*, Load Zone J); and (4) Long Island (*i.e.*, Zone K), except for Class Year Interconnection Facility Studies conducted prior to Class Year 2012, for which "Capacity Region" shall be defined as set forth in Section 25.7.3 of this Attachment S.

**Capacity Resource Interconnection Service ("CRIS"):** The service provided by the ISO to Developers that satisfy the NYISO Deliverability Interconnection Standard or that are otherwise eligible to receive CRIS in accordance with this Attachment S; such service being one of the eligibility requirements for participation as an ISO Installed Capacity Supplier.

**Class Year:** The group of generation projects and Class Year Transmission Projects included in any particular Class Year Interconnection Facilities Study (Annual Transmission Reliability Assessment and ~~or~~ Class Year Deliverability Study), in accordance with the criteria specified in this Attachment S and in Attachment Z for including such projects.

**Class Year CRIS Project:** A Class Year Project with an executed Class Year Interconnection Facilities Study Agreement entering a Class Year Study for a CRIS evaluation, that thereby becomes one of the group of Class Year Projects included in the Class Year Deliverability Study. A Class Year CRIS Project may be a "CRIS-only" project that is entering a Class Year Study only for a CRIS evaluation, or it may be a project seeking both ERIS and CRIS.

**Class Year Deliverability Study:** An assessment, conducted by the ISO staff in cooperation with Market Participants, to determine whether System Deliverability Upgrades are required for Class Year CRIS Projects under the NYISO Deliverability Interconnection Standard.

**Class Year Interconnection Facilities Study ("Class Year Study")** shall mean a study conducted by the ISO or a third party consultant for the Developer to determine a list of facilities (including Connecting Transmission Owner's Attachment Facilities, Distribution Upgrades, System Upgrade Facilities and System Deliverability Upgrades as identified in the Interconnection System Reliability Impact Study), the cost of those facilities, and the time required to interconnect the Large Generating Facility or Class Year Transmission Project with the New York State Transmission System or with the Distribution System. The scope of the

study is defined in Section 30.8 of the Large Facility Interconnection Procedures in Attachment X to the ISO OATT.

**Class Year Interconnection Facilities Study Agreement** (“Class Year Study Agreement”) shall mean the form of agreement contained in Appendix 2 of the Large Facility Interconnection Procedures in Attachment X to the ISO OATT for conducting the Class Year Interconnection Facilities Study.

**Class Year Project:** An Eligible Class Year Project with an executed Class Year Interconnection Facilities Study Agreement that thereby becomes one of the group of generation projects and Class Year Transmission Projects included in any particular Class Year Interconnection Facilities Study (Annual Transmission Reliability Assessment and/or Class Year Deliverability Study), in accordance with the criteria specified in this Attachment S and in Attachment Z for including such projects.

**Class Year Start Date:** The deadline for Eligible Class Year Projects to enter a Class Year Interconnection Facilities Study, determined in accordance with Section 25.5.9 of this Attachment S.

**Class Year Transmission Project** shall mean a Developer’s proposed new transmission facility that will interconnect to the New York State Transmission System or a proposed upgrade—an improvement to, addition to, or replacement of a part of an existing transmission facility—to the New York State Transmission System, for which (1) the Developer is eligible to request and does request Capacity Resource Interconnection Service, subject to the eligibility requirements set forth in the ISO Procedures; or (2) the Developer requests only Energy Resource Interconnection Service and the transmission facility for which it requests Energy Resource Interconnection Service is a transmission facility over which power flow can be directly controlled by power flow control devices directly connected to the Class Year Transmission Project without having to re-dispatch generation. Class Year Transmission Projects shall not include Attachment Facilities, Network Upgrade Facilities, System Upgrade Facilities or System Deliverability Upgrades.

**Connecting Transmission Owner:** The New York public utility or authority (or its designated agent) that (i) owns facilities used for the transmission of Energy in interstate commerce and provides Transmission Service under the Tariff, (ii) owns, leases or otherwise possesses an interest in the portion of the New York State Transmission System or Distribution System at the Point of Interconnection, and (iii) is a Party to the Standard Large Generator Interconnection Agreement.

**Contribution Percentage:** The ratio of an interconnection project’s measured impact or pro rata contribution to a System Upgrade Facility identified in the Annual Transmission Reliability Assessment, to the sum of the measured impacts or pro rata contributions of all the projects that have at least a *de minimus* impact or contribution to the System Upgrade Facility.

**Developer:** For purposes of this Attachment S, references to Developer(s) include (i) Developer(s) of Large Facilities, (ii) Interconnection Customers of Small Generating Facilities subject to the Rules in this Attachment S pursuant to Section 32.1.1.7 and/or Section 32.3.5.3.2

of Attachment Z to the OATT; and (iii) owners of facilities seeking to obtain or increase CRIS as permitted by this Attachment S.

**Distribution System:** The Transmission Owner's facilities and equipment used to distribute electricity that are subject to FERC jurisdiction, and are subject to the ISO's Large Facility Interconnection Procedures in Attachment X to the ISO OATT or Small Generator Interconnection Procedures in Attachment Z to the ISO OATT under FERC Order Nos. 2003 and/or 2006. The term Distribution System shall not include LIPA's distribution facilities.

**Distribution Upgrades:** The modifications or additions to the existing Distribution System at or beyond the Point of Interconnection that are required for the proposed project to connect reliably to the system in a manner that meets the NYISO Minimum Interconnection Standard. Distribution Upgrades do not include Interconnection Facilities, System Upgrade Facilities, or System Deliverability Upgrades.

**Eligible Class Year Project:** Any Developer or Interconnection Customer that (i) satisfies the criteria for inclusion in the next Class Year Interconnection Facilities Study, as those criteria are specified in Sections 25.5.9 and 25.6.2.3.1 of this Attachment S, Section 32.1.1.7 of Attachment Z to the OATT and/or Section 32.3.5.3.2 of Attachment Z to the OATT; or (ii) that seeks evaluation in a Class Year Study to obtain or increase CRIS as permitted by this Attachment S and satisfies the criteria for inclusion in the next Class Year Interconnection Facilities Study specified in Section 25.5.9 of this Attachment S.

**Energy Resource Interconnection Service “(ERIS)”:** The service provided by the ISO to interconnect the Developer's Large Generating Facility, Class Year Transmission Project or Small Generating Facility required to participate in a Class Year Interconnection Facilities Study under Section 32.3.5.3 of Attachment Z to the New York State Transmission System or to the Distribution System, in accordance with the NYISO Minimum Interconnection Standard, to enable the New York State Transmission System to receive Energy and Ancillary Services from the Large Generating Facility, Class Year Transmission Project or Small Generating Facility required to participate in a Class Year Interconnection Facilities Study under Section 32.3.5.3 of Attachment Z, pursuant to the terms of the ISO OATT.

**Existing System Representation:** The representation of the New York State Power System developed as specified in Section 25.5.5 of this Attachment S.

**Expedited Deliverability Study:** A study conducted by the ISO or a third party consultant to determine the extent to which an existing or proposed facility satisfies the NYISO Deliverability Interconnection Standard at its requested CRIS level without the need for System Deliverability Upgrades. The schedule and scope of the study is defined in Sections 25.5.9.2.1 and 25.7.1.2 of this Attachment S.

**External CRIS Rights:** A determination of deliverability within the Rest of State Capacity Region (*i.e.*, Load Zones A – F), awarded by the ISO for a term of five (5) years or longer, to a specified number of Megawatts of External Installed Capacity that satisfy the requirements set forth in Section 25.7.11 of this Attachment S to the ISO OATT, and that can be certified in a

Bilateral Transaction used for the NYCA and not a Locality, or sold into the NYCA for an Installed Capacity auction and not in an Installed Capacity auction for a Locality.

External-to-ROS Deliverability Rights: The meaning set forth in Section 2.5 of the Services Tariff.

**Final Decision Round:** The round of ISO-communicated cost estimates and Developer responses for a Class Year Interconnection Facilities Study, in which all remaining eligible Developers issue an Acceptance Notice and post Security.

**Financial Settlement:** The Settlement Agreement approved by FERC in Docket Nos. EL02-125-000 and EL02-125-001 addressing the financial issues raised in those proceedings.

**Headroom:** The functional or electrical capacity of the System Upgrade Facility or the electrical capacity of the System Deliverability Upgrade that is in excess of the functional or electrical capacity actually used by the Developer's generation project or Class Year Transmission Project.

**Highway:** 115 kV and higher transmission facilities that comprise the following NYCA interfaces: Dysinger East, West Central, Volney East, Moses South, Central East/Total East, and UPNY-ConEd, and their immediately connected, in series, Bulk Power System facilities in New York State. Each interface shall be evaluated to determine additional "in series" facilities, defined as any transmission facility higher than 115 kV that (a) is located in an upstream or downstream zone adjacent to the interface and (b) has a power transfer distribution factor (DFAX) equal to or greater than five percent when the aggregate of generation in zones or systems adjacent to the upstream zone or zones which define the interface is shifted to the aggregate of generation in zones or systems adjacent to the downstream zone or zones which define the interface. In determining "in series" facilities for Dysinger East and West Central interfaces, the 115 kV and 230 kV tie lines between NYCA and PJM located in LBMP Zones A and B shall not participate in the transfer. Highway transmission facilities are listed in ISO Procedures.

**Initial Decision Period:** The 30 calendar day period within which a Developer must provide an Acceptance Notice or Non-Acceptance Notice to the ISO in response to the first Project Cost Allocation issued by the ISO to the Developer.

**Interconnection System Reliability Impact Study ("SRIS"):** An engineering study that evaluates the impact of the proposed Large Generation Facility or Class Year Transmission Project on the safety and reliability of the New York State Transmission System and, if applicable, an Affected System, to determine what Attachment Facilities, Distribution Upgrades and System Upgrade Facilities are needed for the proposed Large Generation Facility or Class Year Transmission Project of the Developer to connect reliably to the New York State Transmission System or to the Distribution System in a manner that meets the NYISO Minimum Interconnection Standard for ERIS. The scope of the SRIS is defined in Section 7.3 of the Large Facility Interconnection Procedures in Attachment X to the ISO OATT.

**Large Facility:** A Large Generating Facility or a Class Year Transmission Project.



**NERC Planning Standards:** The transmission system planning standards of the North American Electric Reliability Council.

**Non-Acceptance Notice:** The notice by which a Developer communicates to the ISO its decision not to accept a Project Cost Allocation or Revised Project Cost Allocation.

**Non-Financial Settlement:** The Settlement Agreement approved by FERC in Docket Nos. EL02-125-000 and EL01-125-001 addressing non-financial issues for future cost allocations.

**NPCC Basic Design and Operating Criteria:** The transmission system design and operating criteria of the Northeast Power Coordinating Council.

**NYISO Deliverability Interconnection Standard:** The standard that must be met, unless otherwise provided for by this Attachment S, by (i) any generation facility larger than 2 MW in order for that facility to obtain CRIS (ii) any Class Year Transmission Project; (iii) any entity requesting External CRIS Rights, and (iv) any entity requesting a CRIS transfer pursuant to Section 25.9.5 of this Attachment S. To meet the NYISO Deliverability Interconnection Standard, the Developer must, in accordance with these rules, fund or commit to fund any System Deliverability Upgrades identified for its project in the Class Year Deliverability Study.

**NYISO Load and Capacity Data Report:** The annual ISO survey of power demand and supply in New York State, published pursuant to Section 6-106 of the Energy Law of New York State.

**NYISO Minimum Interconnection Standard:** The reliability standard described in Section 25.2 of this Attachment S that must be met by any generation project or Class Year Transmission Project that is subject to ISO's Large Facility Interconnection Procedures in Attachment X to the ISO OATT or the ISO's Small Generator Interconnection Procedures in Attachment Z to the ISO OATT, that is proposing to connect to the New York State Transmission System or to the Distribution System to obtain ERIS. The Standard is designed to ensure reliable access by the proposed project to the New York State Transmission System or to the Distribution System, as applicable. The Standard does not impose any deliverability test or deliverability requirement on the proposed project.

**NYSRC Reliability Rules:** The reliability rules of the New York State Reliability Council.

**Open Class Year:** Class Year open for new members pursuant to the Class Year Start Date deadline specified in Section 25.5.9 of this Attachment S.

**Other Interfaces:** The following Interfaces into Capacity Regions: Lower Hudson Valley [*i.e.*, Rest of State (Load Zones A-F) to Lower Hudson Valley (Load Zones G, H and I)]; New York City [*i.e.*, Lower Hudson Valley (Load Zones G, H and I) to New York City (Load Zone J)]; and Long Island [*i.e.*, Lower Hudson Valley (Load Zones G, H and I) to Long Island (Load Zone K)], and the following Interfaces between the NYCA and adjacent Control Areas: PJM to NYISO, ISO-NE to NYISO, Hydro-Quebec to NYISO, and Norwalk Harbor (Connecticut) to Northport (Long Island) Cable.



**Overage Cost:** The dollar amount by which the total cost of System Upgrade Facilities identified in the Annual Transmission Reliability Assessment exceeds the total cost of System Upgrade Facilities considered in the Annual Transmission Baseline Assessment for the same Class Year.

**Overage Cost Percentage:** The ratio of the Overage Cost to the total cost of System Upgrade Facilities identified in the Annual Transmission Reliability Assessment.

**Project Cost Allocation:** The dollar figure estimate for a Developer's share of the cost of the System Upgrade Facilities required for the reliable interconnection of its project to the New York State Transmission System or to the Distribution System and/or the share of the cost of the System Deliverability Upgrades required for the Developer's project to meet the NYISO Deliverability Interconnection Standard.

**Revised Project Cost Allocation:** The revised dollar figure cost estimate and related information provided by the ISO to a Developer following receipt by the ISO of a Non-Acceptance Notice, or upon the occurrence of a Security Posting Default by another member of the respective Class Year.

**Security:** Under the interconnection facilities cost allocation rules set out in [this](#) Attachment S, a Developer must signify its willingness to pay the Connecting Transmission Owner and Affected Transmission Owner(s) for the Developer's share of the required System Upgrade Facilities and System Deliverability Upgrades by posting Security for the full amount of the Developer's share within a specified time frame. The Security can be a bond, irrevocable letter of credit, parent company guarantee or other form of security from an entity with an investment grade rating, executed for the benefit of the Connecting Transmission Owner and Affected Transmission Owner(s), meeting the requirements of [this](#) Attachment S, and meeting the commercially reasonable requirements of the Connecting Transmission Owner and Affected Transmission Owner(s).

**Security Posting Default:** A failure by one or more Developers to post Security as required by this Attachment S.

**Subsequent Decision Period:** A seven calendar day period within which a Developer must provide an Acceptance Notice or Non-Acceptance Notice to the ISO in response to the Revised Project Cost Allocation issued by the ISO to the Developer.

**System Deliverability Upgrades:** The least costly configuration of commercially available components of electrical equipment that can be used, consistent with Good Utility Practice and Applicable Reliability Requirements, to make the modifications or additions to Byways and Highways and Other Interfaces on the existing New York State Transmission System that are required for the proposed project to connect reliably to the system in a manner that meets the NYISO Deliverability Interconnection Standard at the requested level of Capacity Resource Interconnection Service.

**System Upgrade Facilities:** The least costly configuration of commercially available components of electrical equipment that can be used, consistent with Good Utility Practice and Applicable Reliability Requirements, to make the modifications to the existing transmission

system that are required to maintain system reliability due to: (i) changes in the system, including such changes as load growth, and changes in load pattern, to be addressed in accordance with Section 25.4.1 of this Attachment S; and (ii) proposed interconnections. In the case of proposed interconnection projects, System Upgrade Facilities are the modifications or additions to the existing New York State Transmission System that are required for the proposed project to connect reliably to the system in a manner that meets the NYISO Minimum Interconnection Standard.